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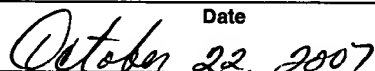|		
INVENTOR(S)	:	Hayes, et al.
TITLE	:	**CONFIGURABLE BILLING SYSTEM SUPPORTING MULTIPLE PRINTER PRODUCTS AND BILLING SYSTEMS**
APPLICATION NO.	:	09/750,603
FILED	:	December 28, 2000
CONFIRMATION NO.	:	6753
EXAMINER	:	Stephanos Karmis
ART UNIT	:	3691
ATTORNEY DOCKET NO.	:	99181-US-NP XERZ 2 00346

REPLY BRIEF UNDER 37 C.F.R. §41.41

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Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Reply Brief is being filed within two months of the August 22, 2007 mailing of the Examiner's Answer in the Appeal of the above-identified patent application.

Reply to Section (9) --Grounds of Rejection-- (of the Examiner's Answer)

It is noted that Section 9 of the Examiner's Answer provides a restatement of the rejections and explanations thereof that were presented in the non-final Office Action that was mailed April 24, 2006. While the present final Office Action, which was mailed August 8, 2006, maintained those rejections, it is noted that the final Office Action includes additional and/or different discussion of the rejections.

Reply to Section (10) --Response to Arguments-- (of the Examiner's Answer)

Section A

Section A of the Examiner's Response to Argument addresses the arguments of the Appellants with regard to the rejections of **claims 1-18**, **20** and **23** under 35 U.S.C. §112, second paragraph, for including the term "arbitrarily" in reference to the recitation of an --arbitrarily long list-- and the like.

In so doing, Section A paraphrases the definitions provided on page 16 and 17 of the Brief on Appeal submitted by the Appellants. Section A asserts that according to those definitions, "the arbitrarily long list of aspects could be determined: (1) at will, (2) based on choice or discretion, (3) arising from unrestrained exercise of the will, caprice or personal preference: (4) selected at random (5) based on random or convenient selection or choice rather than reason or nature...etc." However, that paraphrasing is somewhat misleading.

What Section A breaks down into (1) at will and (3) arising from unrestrained exercise of the will, caprice or personal preference is actually taken from a single definition which reads "arising from unrestrained exercise of the will, caprice or personal preference." The reference to (4) selected at random appears to be a truncation of the recitation of: "selected at random or as a typical example < *such arbitrary* items as clothing, room furnishings, travel, *official register of Harvard University* >. The reference to (2) based on choice or discretion and (5) based on random or convenient selection or choice rather than reason or nature appear to be taken from the recitation in the definition of "based on random or convenient selection or choice rather than on reason or nature." Accordingly, it is respectfully submitted that, contrary to the assertions of Section A, one of ordinary skill in the art is not required to select from among the choices alleged in Section A.

Additionally, the Appellants maintain that one of ordinary skill in the art would understand that a "arbitrarily long list" would have a length depending on choice or discretion based on a convenient selection or choice. As evidence of this, in addition to the approximately 21 issued patents that include the phrase **"arbitrarily long"** in respective claims thereof that are identified on pages 18-21 of the Brief on Appeal of the Appellants, the Appellants are including herewith a small portion of the results of a literature search that identified **742 books that include** the phrase **"arbitrarily long."**

The portion of the search results included herewith includes snippets from the first 30 books identified by the search.

For example, page 258 of <u>Neural Networks and Pattern Recognition</u> by Omid. Omidvar and Judith E. Dayhof discusses using Rehearsal to process **arbitrarily long** lists.

Page 176 of <u>Ramsey Theory on Integers</u> by Bruce M. Landman and Aaron Robertson discusses an example wherein there exists a "set of positive integers that contain **arbitrarily long** members."

Page 65 of <u>Kvant Selecta: Combinatorics, I</u> by Serge Tabachnikov refers to a proof of "the existence of **arbitrarily long** non-repeating sequences."

Page 97 of <u>Rings, Modules, and the Total</u> by F. Kasch and Adolf Mader refers to "an element that has **arbitrarily long** extensions."

Page 52 of <u>Criteria for Divisibility</u> by Nikolaĭ Nikolaevich Vorob'ev indicates that "no number can have arbitrarily long chains of predecessors."

Page 486 of <u>Handbook of Information Security</u> by Hossein Bidgoli indicates that a scheme discussed above "immediately extends to allow encryption of **arbitrarily long** messages."

Page 30 of <u>Discovering Mathematics: the Art of Investigation</u> asks "can you construct **arbitrarily long** sequences of 0s and 1s in which no digit, and no string of digits, appears three times in succession?"

Page 82 of <u>Introduction to Modern Number Theory: Fundamental Problems, Ideas and Theories</u> by A. A. Pinchishkin and I. U. I. Manin asserts that "it was a well known classical folklore conjecture that there are **arbitrarily long** arithmetic progressions of prime numbers."

A snippet taken from page 398 of <u>Encyclopedia of Microcomputers</u> by Alan Kent, James G. Williams, Rosalind Kent and Carolyn M. Hall includes the phrase -- **arbitrarily closely**-- and two instances of the phrase --**arbitrarily long**--.

Accordingly, it is respectfully submitted that one of ordinary skill in the art would understand that an arbitrarily long list has a length depending on choice or discretion, based on convenient selection or choice and **claims 1-18**, **20** and **23** are definite, and reversal of the Examiner's rejection is respectfully requested.

Additionally, the omnibus dismissal (on page 9 of the Examiner's Answer) of the citation of the Applicants to over 21 claims of allowed U.S. patents that include phrase such as "arbitrarily long" and "arbitrarily large" as not being "read in the same context as the present claims" is respectfully traversed. It is respectfully submitted that the context of generating arbitrarily long test data, arbitrarily long test patterns, arbitrarily long file names, arbitrarily long durations, arbitrarily long sequences, arbitrarily long series of audio coefficients, arbitrarily long periods of time, arbitrarily long data streams, arbitrarily long leads, arbitrarily long messages, arbitrarily long periods, arbitrarily long unique logical addresses, arbitrarily long repetition cycles recited in the claims of the subject patents are all similar enough in context to indicate that one of ordinary skill in the art would understand the phrase --arbitrarily long list--.

The further assertion that the term "arbitrarily" fails to particularly point out and distinctly claim the invention is respectfully traversed *a fortiori*. What is being claimed is a configurable billing system. The ability of the billing strategy to include arbitrarily long lists of aspects of interest and then arbitrarily long lists of meter descriptions contributes to this configurability. Accordingly, the recitation of arbitrarily long lists particularly points out and distinctly claims what the Appellants consider to be the invention.

Section B

Section B of the Response to Arguments provided in the Examiner's Answer addresses arguments of the Appellants regarding the rejection of **claims 1-7**, **16**, **17** and **19-23** under 35 U.S.C. §102(e) as being anticipated by Maruta.

The Examiner pointed out that Maruta is not a newly cited reference. Maruta was first cited in the non-final Office Action that was mailed April 24, 2006. The final Office Action, which was mailed August 8, 2006, and which is the subject of the

present Appeal, maintained the rejections of the April 4, 2006 Office Action. Maruta was newly cited in the April 4, 2006 Office Action and it is in this context that it was referred to as the newly cited reference in the Brief on Appeal of the Appellants.

Section B also addresses three of the arguments presented in the Brief on Appeal of the Appellants related to the rejection of **claims 1-7, 16, 17** and **19-23** under 35 U.S.C. §102(e) as being anticipated by Maruta. As characterized by the Examiner's Answer, those arguments are that the system of Maruta (1) is not configurable; (2) does not disclose a coded billing strategy including a list of aspects of interest and a list of meter descriptions; and (3) does not disclose allowing the list of aspects of interest and the list of meter descriptions to be arbitrarily long. The Examiner's Answer indicates that these arguments can be found on pages 23-25 of the Brief on Appeal.

It is noted that the Examiner's Answer does not address or take issue with the assertion of the Applicants that column 10, lines 1-10, cited by the Office Action (e.g., see page 4 of the Examiner's Answer) in support of the assertion that Maruta discloses a configurable billing system for a machine, the machine operative to output a product or service and including a plurality of sensors, the sensors operative to detect the delivery of aspects of the product or service and to report the delivery to the billing system, the billing system comprising: a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine does not support such an assertion. Accordingly, it is respectfully submitted that it appears the Examiner accepts this argument of the Appellants.

With regard to item (1) of the arguments that the Examiner's Response does address, the Examiner's Answer cites *In re: Hirao* and asserts that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness.

In reply, it is noted that Applicant's argument (under Section D, see pages 23 and 24 of the Brief on Appeal) does not rely on language from the preamble.

Nevertheless, it is respectfully submitted that in the present instance, **claim 1** does depend on the preamble for completeness. Without the preamble, **claim 1** recites disembodied coded billing strategy and plurality of meters. In any event, as has been pointed out previously, the configurability of the billing system recited in

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claim 1 is provided by the coded billing strategy and its ability to include an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine (i.e., the machine introduced in the preamble) and the plurality of meters updated by the billing system (i.e., the billing system introduced in the preamble) for recording the delivery of the aspects of the product or service (i.e., the product or service introduced in the preamble) based on the billing strategy whereby the billing system tallies the aspects in a manner defined in the billing strategies.

The assertion of the Examiner's Answer (after the citation to *In re: Hirao* on page 10) that "there are no limitation in the body of these claims in which configuring a billing system is performed" is respectfully traversed.

With regard to **claims 1** and **6**, it is noted that the claims recite a system and, of course, do not recite actions.

Claim 19 does recite a method and the configuring results from predefining a billing strategy specification, the billing strategy specification including a list of parameters with implicit or explicit communication mechanisms and data parsing information, and process algorithm information in the form of a machine-readable script, storing the billing strategy specification in a machine-readable form, reading the stored billing strategy specification, instantiating metered data structures as directed by the read billing strategy specification, monitoring a document processing procedure as directed by the read billing strategy specification and updating the meter data structures as directed by the read billing strategy specification.

Claims 20 and **21** recite respective configurable billing systems and accordingly recite system components and not actions.

Claim 23 recites a document processor and, again, recites system components and not actions.

The Examiner's Answer refers to the "top of page 3" and asserts that Applicant's remarks regarding configuring a billing system refer to passages in the specification rather than the claims. However, page 3 of the Brief on Appeal addresses related appeals and interferences and does not discuss configuring a billing system or refer the specification. Accordingly, the Appellants assume that the reference to page 3 was meant to be a reference to page 23. However, the top of page 23 addresses Maruta. It is noted that the top of page 24 also addresses Maruta and assertions of the Office Action related thereto.

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With regard to independent **claims 16** and **22** (which are not included in the subject set of rejected claims (i.e., **claims 1, 6, 19-21** and **23**)) apparently being addressed with regard to argument (1), page 10 of the Examiner's Answer stipulates that -- configurable-- is recited in the body of the claim. However, the Examiner's Answer goes on to assert that Maruta teaches a configurable billing system. In support of this assertion, the Examiner's Answer cites column 11, lines 4-18, and apparently, column 11, lines 20-67, which fall under the heading --Second Embodiment--. However, the cited portions of column 11 are directed toward embodiments of a printing system and do not disclose or suggest configurable billing system. Lines 4-18 indicate that "alternatively a structure can be provided to set the copy mode at this current stage (at the time point of NO at step S 141 and prompt resetting of a document). The main scanning operation is executed for the document set again. Then, print operation thereof can be initiated. Also, a structure can be provided in which the image data is stored at the main scanning operation subsequent to the pre-scanning and set only the copy machine mode at this time point. In other words, a structure that permits a copy operation, upon depression of "OK" button, is provided. Furthermore, a structure can be provided to carry out a process similar to that when the "OK" button is depressed in the event that the "NO" is not depressed at an elapse of a predetermined period of time after display of the printout cost is provided." It is respectfully submitted that nothing in column 11, lines 4-11, discloses or suggests a configurable billing system.

The Appellants will not burden this document with the text of the remaining portion of column 11. However, the attention of the board is directed thereto. It is respectfully submitted that nothing in column 11 of Maruta discloses or suggests a configurable billing system.

The Examiner's Answer also asserts that it would be inherent that the software calculating the cost for printing could be updated for increased prices. Even if this were so, nothing in updating prices discloses or suggests a configurable billing system operative to follow a billing strategy specification including an **arbitrarily long list of document production events** of interest, an **arbitrarily long list of meter descriptions** and a **machine-readable script** for updating the meters defined in the list to record the occurrences of the document production events as described in the billing strategy specification as is recited in **claim 16** or a configurable billing system operative to run a **machine-readable script** receiving a

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billing strategy file, the machine readable script being operative to, at least one of, instantiate and update a set of meters for recording the occurrence of document production as is recited in **claim 22**.

The Examiner's Answer also acknowledges the argument of the Applicants that the cited portions of Murata are directed toward events that occur prior to printing a document. In this regard, the Examiner's Answer asserts that **claims 16** and **22** are not limited to post printing. The Applicants agree. For example, both **claim 16** and **claim 22** recited "the marker module is operative to control the print engine <u>in the production of documents</u>, and to report <u>document production events</u> to the billing system. Accordingly, while **claims 16** and **22** are not limited to post printing, they do recite aspects related to activities that occur <u>during</u> printing.

In this regard, it is respectfully submitted that the Examiner's Answer appears to acknowledge that the cited portions of Murata are directed toward activities that occur <u>prior</u> to printing.

With regard to argument (2) (as characterized by the Examiner's Answer), the Examiner's Answer appears to object to citations to the specification of the present application included in the arguments on pages 23 and 24 of the Brief on Appeal of the Appellants and asserts that given the "broadest reasonable interpretation, Maruta discloses a coded billing strategy" and cites portions of column 9, 10, 21 and 19 in support of the assertion. However, even if the phrase --coded billing strategy-- were being used by the Appellants in a manner contrary to its ordinary meaning, the Applicants may act as their own lexicographer (see MPEP §2106; *In re Paulson*, 30 F3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994) and *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576 (Fed. Cir. 1996). The citations to the specification objected to by the Examiner's Answer rebut the assumption of the Office Action that the claim terms are to be given the meaning asserted by the Office Action. Accordingly, it is respectfully submitted that the portions of Maruta cited by the Office Actions and by the Examiner's Answer do not disclose or suggest a --coded billing strategy-- according to the meaning clearly intended by the Applicants as indicated by the portions of the present specification cited in the Brief on Appeal.

Moreover, the claims of the present application do not simply recite a "coded billing strategy," and even if Maruta could be construed to fairly disclose a "coded billing strategy," Maruta cannot be fairly construed to disclose a coded billing

strategy **including** an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for a machine as recited in independent **claim 1** of the present application.

Maruta cannot be fairly construed to disclose a configurable billing system operative to follow a billing strategy specification including an arbitrarily long list of document production events of interest, an arbitrarily long list of meter descriptions and **a machine-readable script** for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy specification as recited in **claim 16** of the present application.

Maruta cannot be fairly construed as disclosing or suggesting predefining a billing strategy specification, the billing strategy specification including a list of parameters with **implicit or explicit communication mechanisms** and **data parsing information** and process algorithm information in the form of **machine-readable script** as recited in **claim 19** of the present application.

It is respectfully submitted Maruta cannot be fairly construed as disclosing storing such a billing strategy specification in a machine-readable form and reading the stored billing strategy specification as is also recited in **claim 19** of the present application.

Even if Maruta could be construed as disclosing such billing strategies, coded billing strategies or billing strategy specifications, Maruta cannot be fairly construed as disclosing or suggesting a custom billing strategy **file** including an arbitrarily long list of aspects of interest with an arbitrarily long list of meter descriptions defined for the machine and a **means for loading** the custom billing strategy **file** as recited in independent **claim 20** of the present application.

Maruta cannot be fairly construed as disclosing a coded billing strategy **description**, accessible by the billing system, including a **machine-readable script**, a plurality of meters defined in the **machine-readable script** as mathematical functions of information received from one or more aspect sensors and a billing module operative to update the plurality of meters according to the functions implemented by the **machine-readable script** as recited in independent **claim 21** of the present application.

Maruta cannot be fairly construed as disclosing a configurable billing system operative to run a **machine-readable script** received in a **billing strategy file**, the **machine-readable script** being operative to, at least one of, instantiate and update

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a set of meters for recording <u>the occurrence of document production</u> as recited in **claim 22** of the present application.

Murata cannot be fairly construed as disclosing a <u>billing strategy **file**</u> to finding a billing strategy in machine-readable form, the <u>billing strategy **file**</u> describing an <u>arbitrarily large number of mathematical functions</u> of an <u>arbitrarily large number of meters</u> for processing and recording information reported by the at least one aspect sensor and a billing module operative to <u>receive **the billing strategy file**</u> and instantiate the arbitrarily large number of meters according to the billing strategy as recited in independent **claim 23** of the present application.

With regard to the assertion at the end of the first paragraph on page 11 of the Examiner's Answer that **claim 1** does not further narrow the "coded billing strategy," the attention of the Board is respectfully directed toward **claim 1**, which recites a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine.

With regard to argument (3) (as characterized by the Examiner's Answer), **the Examiner's Answer does not dispute** the assertion of the Appellants that Murata does not disclose allowing the list of aspects of interest and the list of meter descriptions to be arbitrarily long.

Instead, the Examiner's Answer repeats the assertion that the phrase "arbitrarily long" is indefinite. However, in this regard, it is respectfully submitted that the 21 allowed U.S. patent applications that include the phrase "arbitrarily long" in their claims and the 742 books identified in a recent literature search, the first 30 of which are discussed in the search results portion included herewith and some which are discussed above, clearly show that one of ordinary skill in the art would understand what the phrase "arbitrarily long" means. For at least the foregoing additional reasons, **claims 1-7, 16, 17** and **19-23** are not anticipated by Maruta and reversal of the rejections is respectfully requested.

With regard to dependent **claim 2**, the Examiner's Answer refers to portions of columns 9, 11 and 18 and asserts that "cost calculation analyses images to determine a cost associated with printing, image information regarding the aspects of interest and the images are stored in various formats and the image files are used in cost calculation since the printing cost corresponds to the printout of the image file in respective reference thereto.

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However, **claim 2** recites: the configurable billing system of **claim 1** wherein the coded billing strategy further comprises information regarding a format in which information regarding the aspects of interest will be communicated to the billing system by the machine. None of the cited portions of columns 9, 11 and 18 disclose or suggest a coded billing strategy includes information regarding a format in which information **regarding the aspects of interest** will be communicated **to the billing system** by the machine. The cited portion of column 11 (lines 51-57) includes the word --formats--. However, the word --formats-- occurs in the sentence. --In the second embodiment, an image file is a generic term of a file in which image data of various formats or of a compressed format is stored, a text file in which text data is stored and the like--. Nothing in this discussion of image formats discloses or suggests a coded billing strategy including information regarding a format in which information regarding the aspects of interest will be communicated to the billing system by the machine. The cited portion of column 9 discusses the operation of meters. The cited portion of column 9 does not disclose or suggest a coded billing strategy includes information regarding a format in which information regarding the aspects of interest will be communicated to the billing system. The cited portion of column 18 indicates that a calculated printing cost is sent from a copy machine to a center side data processer. However, the cited portion of column 18 does not disclose or suggest a coded billing strategy includes information regarding a format in which information regarding the aspects of interest will be communicated to the billing system by the machine as recited in **claim 2**.

With regard to **claim 3**, the Examiner's Answer cites column 9, lines 20-41. However, **claim 3** recites the configurable billing system of **claim 1** wherein each meter in the list of meters is described as a function of at least one of the listed aspects of interest. While the cited portion of column 9 discusses meters, the cited portion of column 9 does not disclose or suggest a **list** of meters or that each meter in the list of meters is described as function of at least one of the listed aspects of interest.

Regarding **claims 4, 5, 7** and **17**, the Examiner's Answer asserts that "Appellant provides similar arguments to the ones discussed above and therefore these claims stand or fall with their independent claims." This assertion is respectfully traversed. The attention of the Board is directed to pages 26-27 for arguments related to **claims 4, 5** and **7** and to page 29, for arguments related to

claim 17. The claims are separately argued and do not stand or fall with their independent claims.

Regarding dependent **claims 8-15** and **18**, the Examiner's Answer (on page 12) asserts that the Examiner rejects these claims under 35 U.S.C. §103(a) in view of Maruta and official notice. However, even as presented on page 6 of the Examiner's Answer, **claims 8-15** and **18** are described as rejected under 35 U.S.C. §103(a) as being unpatentable over Maruta, et al. (hereinafter "Maruta") U.S. Patent 6,516,157. Even if the explanation of the rejections includes a reference to official notice, the Office Action provides no suggestion of a motivation for modifying Maruta to include the flags, counts and descriptors recited in **claims 8-15**. It is respectfully submitted that the only motivation for doing so is that gleaned from the present application. Accordingly, the rejection of **claims 8-15** is based on impermissible hindsight reasoning and the Office has not met its burden of presenting a case of *prima facie* obviousness. With regard to **claim 18**, it is respectfully submitted that the fact that xerographic printers are commonly used does not provide a motivation for combining xerographic printers with the subject matter of Maruta, and the Office has not met its burden of presenting a *prima facie* case of obviousness.

Section C of the Response to Argument addresses the argument of the Appellants that the amendment to **claim 22** presented in Amendment E to indicate that the meters are for recording the occurrence of document production events instead of --document production-- did not raise new issues. The Examiner's Answer does not address the fact that, as pointed out in the Brief on Appeal (see page 41) that both **claims 6** and **21** recite document production events and, therefore, correcting **claim 22** to refer to document production events should not have raised new issues, required a new search or placed an undue burden on the Examiner. Furthermore, it is now noted that **claim 22** itself recites a marker module operative to control the print engine in the production of documents and to report document production **events** to the billing system. Accordingly, *a fortiori* the amendment to **claim 22** in Applicants' Amendment E did not raise new issues, did not require a new search and would not have placed an undue burden on the Examiner.
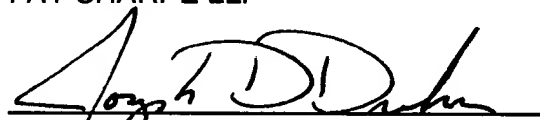
Conclusion

In view of the above and the comments set forth in Applicants' Brief on Appeal under 37 C.F.R. §41.37, which was filed on April 25, 2007, the Applicants respectfully submit that **claims 1-23** point out and distinctly claim the subject matter considered to be the invention, are not anticipated and are not obvious in light of the cited reference and Official Notice. Accordingly, it is respectfully requested the Examiner's rejections of **claims 1-23** be reversed.

Very truly yours,

FAY SHARPE LLP

October 22, 2007
Date

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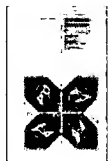
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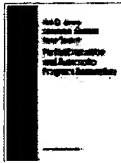Limited preview - About this book - Add to my library

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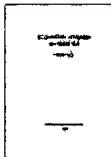Limited preview - About this book - Add to my library - More editions

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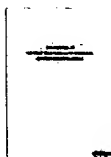
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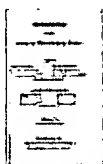
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